

## Evidence that matters

Using data to transform learning

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LEADERSTRANSFORMINGLEARNINGANDLEARNERS





# Trio Talk



*Many schools find themselves in a “data dilemma”. They mistrust data, they fear data, and many do not have the skills to use data wisely or effectively.*

*It is often said that schools are data rich yet information poor.*

- List 10 reasons why this may be so?
- Which of these is most at the heart of the problem?



# Opening up inquiry

Some understandings and principles

# Three fields of knowledge



## Model for Learning



Modified from Networked Learning Communities: Learning about learning networks.



**Internal motivation: Teachers improve through learning their craft, which happens best in PLCs which have access to valid data about achievement.**



**Questions**

Professional Learning Communities

*Inquiry Habit of Mind*

Requires imagination

*What happens?*

**Data: the divide...**

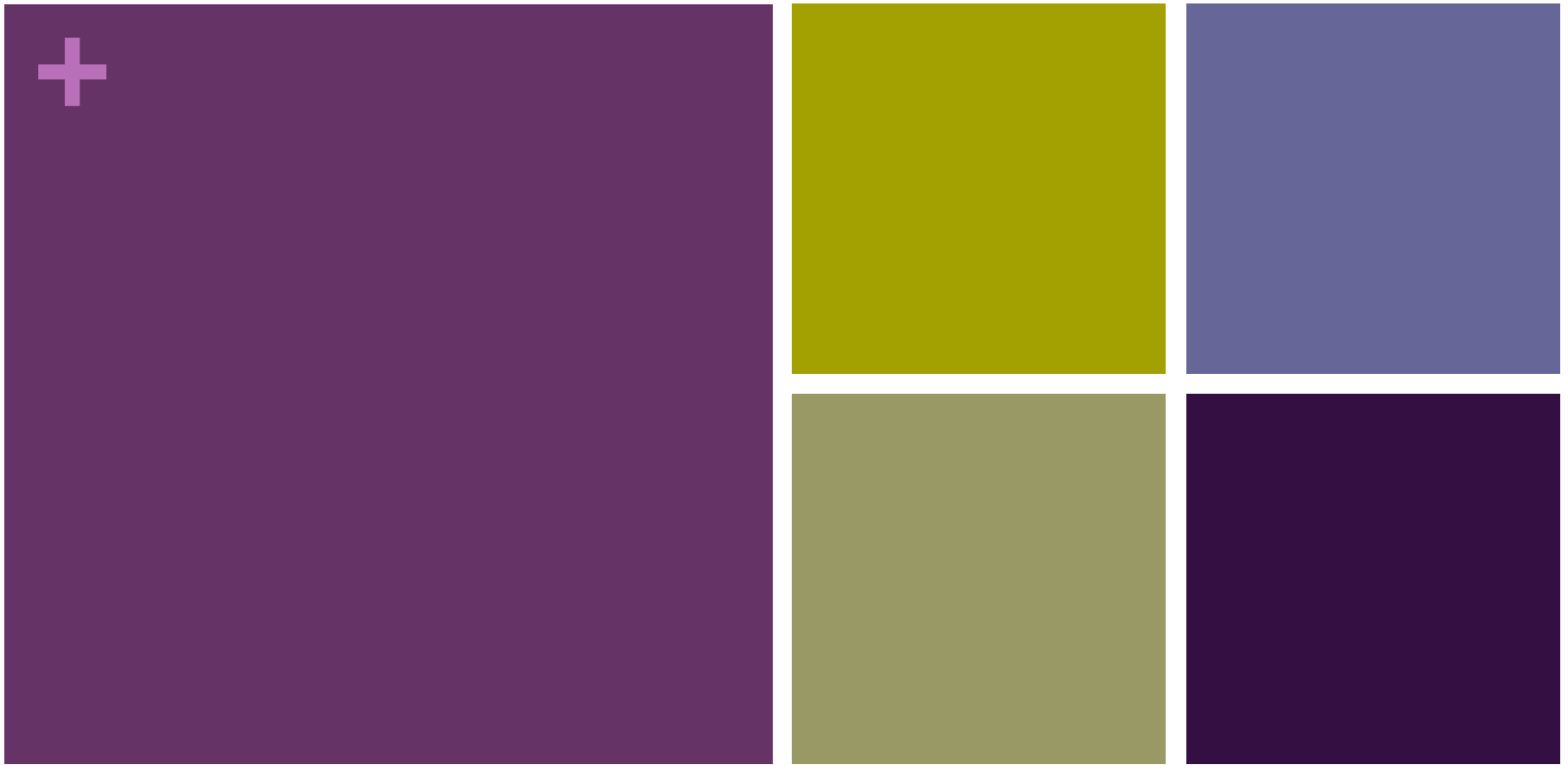
*The underlying assumptions*



**Judgment**

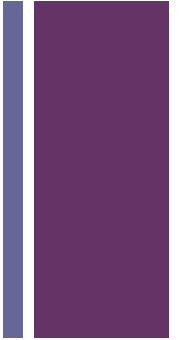
**External motivation: Teachers are motivated to improve by the idea that someone is watching over them, judging and visiting consequences on them if the targets aren't met.**

Thanks to John DeCoursey



The data, used well, frame the right questions;  
Used poorly, they rush to judgment

# + Using data to learn



What evidence have you used to frame your LTLL focus?

Comments

Observations

Insights



# From Data to Professional Knowledge



- Data are
- Making useful information
- Developing informed professional knowledge



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**Our assumptions  
often lead to fact-free  
debates rather than  
sound decisions  
grounded in data.**



**ASSUMPTIONS**

## Evidence:

## What does this indicate?

## Construct:

*He scored 42/60 on  
the midyear test*

*Top mark in the class,  
student has been  
studying well, highly  
motivated...*

*Wonderful learning?*

*Lowest he's ever achieved,  
no sign of any  
preparation, smart  
student, easy test*

*Lazy?*

*Whole class is showing  
improvement, class  
average is better than  
ever gained before...*

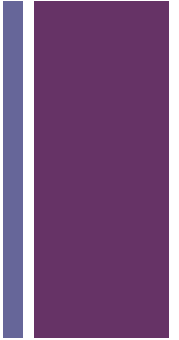
*Superb teaching?*

*Stole the answer sheet  
from the teacher's desk  
the day before...*

*Dreadful cheat?*

Almost any evidence  
can be an indicator of  
many different  
constructs – finding the  
most productive  
questions is the art of  
data analysis.

# + Using data to learn



What evidence have you used to frame your LTLL focus?

Evidence

Indicating

Construct



**Use it to ask the right questions**

**Test the 'Strength' of the evidence: is it a sound link to the construct**

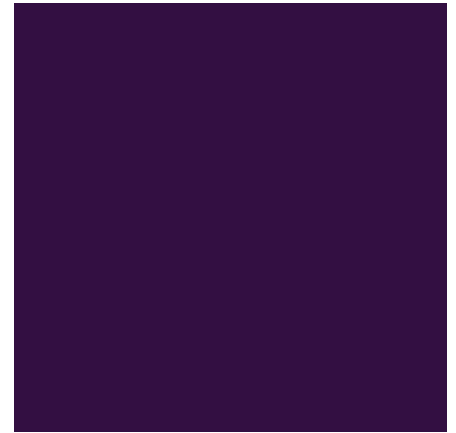
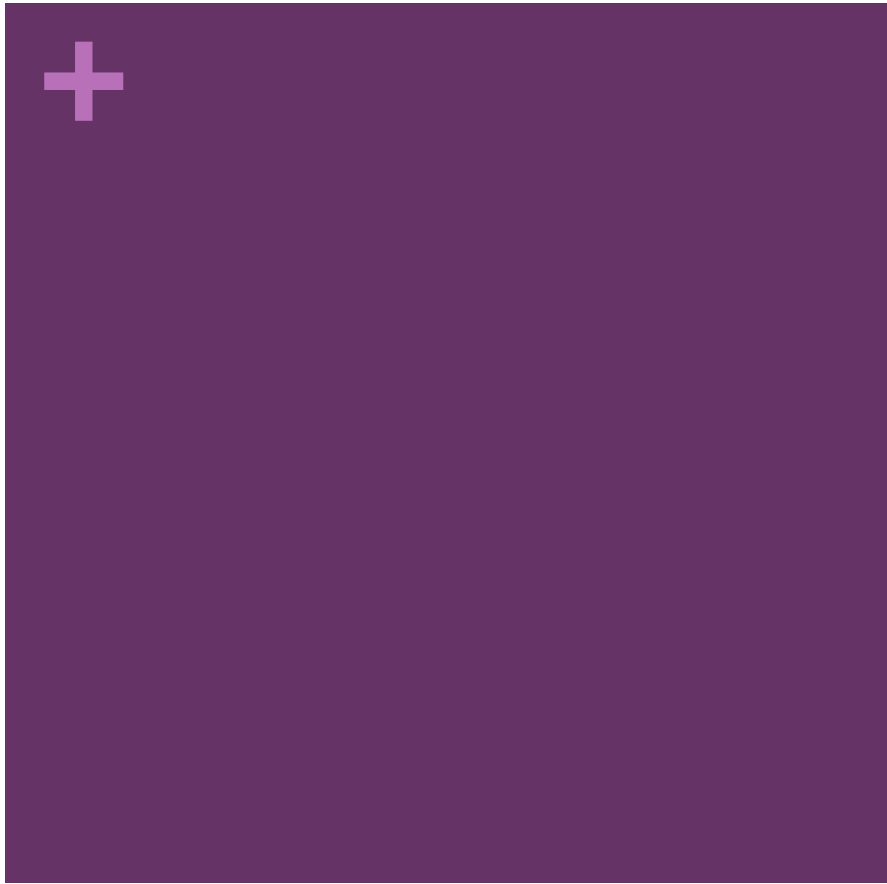
**'Triangulate' the construct – what other way do I have of looking at it?**

## **Using data well**

**Decide on a direction – go top-down, or bottom-up**

**Slice the data different ways: mean, top, bottom, time, individual map**

**Be suspicious of yourself: ask the next question**




## Types of Data

Purpose matters



# Types of data

<b>Outcome</b> <ul style="list-style-type: none"><li>• External tests (NAPLAN, HSC)</li><li>• A – E Reporting Grades</li><li>• Retention rates</li><li>• Enrolment trends</li><li>• Behavioural data</li></ul>	<b>Demographic</b> <ul style="list-style-type: none"><li>• Gender</li><li>• LBOTE</li><li>• ESL</li><li>• SES</li><li>• AEDI</li><li>• Languages</li><li>• Mobility</li><li>• Staff age/mobility</li></ul>
<b>Process</b> <ul style="list-style-type: none"><li>• Observation of practice</li><li>• Descriptive data</li><li>• Policy</li><li>• Quality of practice</li><li>• Professional development</li><li>• School organisation</li></ul>	<b>Perceptual</b> <ul style="list-style-type: none"><li>• Parent survey</li><li>• Focus groups</li><li>• Satisfaction surveys</li><li>• Student attitudinal data</li><li>• Community perceptions</li></ul>



# Leading schools in a data-rich world + The new stupid

- Points from the reading
- Things that “square” with your thinking
- Things that are going around in your head

# Data worth looking at:

*“The value of the data emerges only when analysis provides insights that direct decisions for students.”*

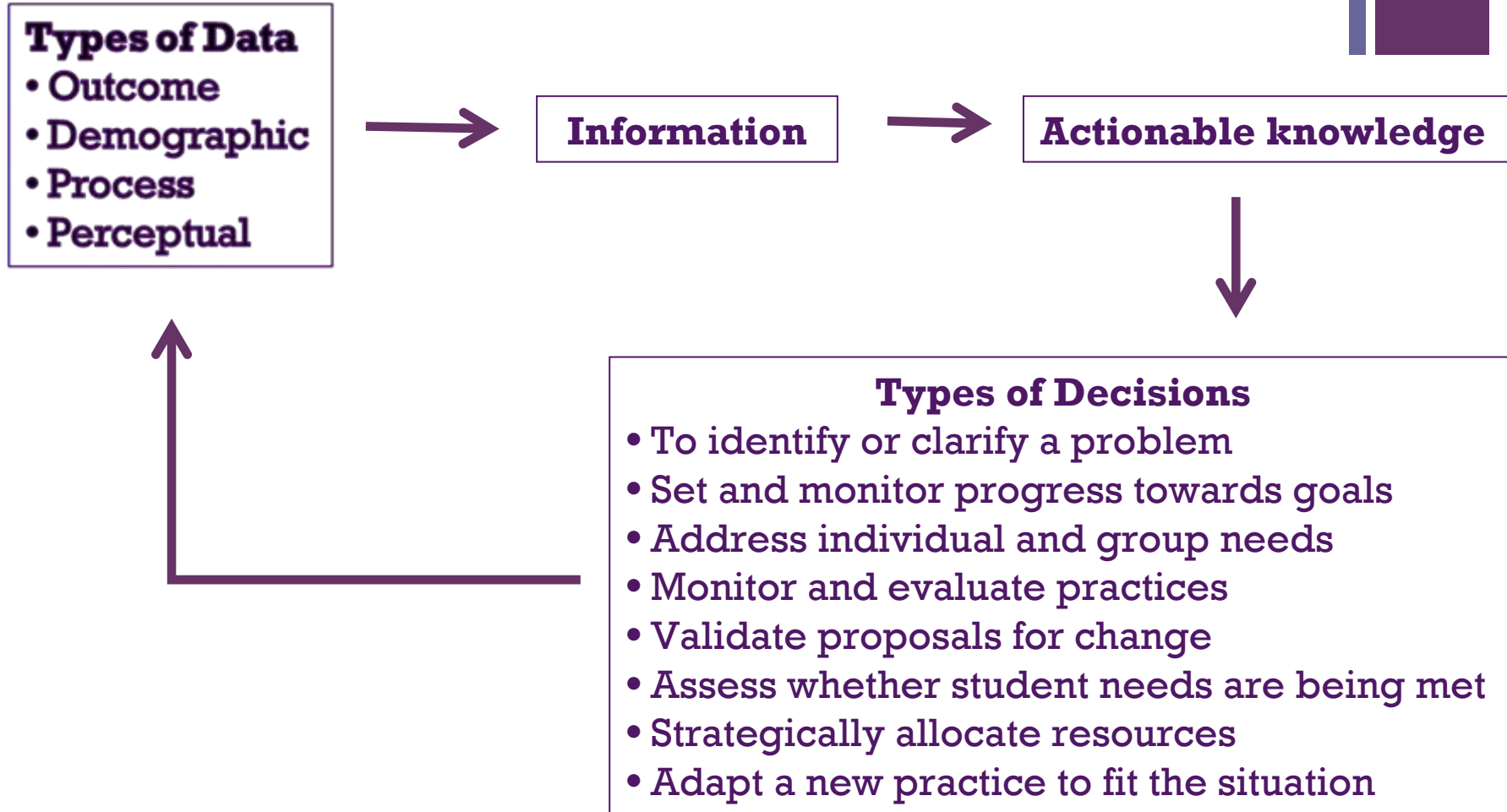
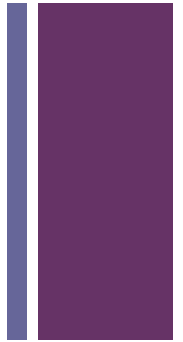
Stephen White,  
Beyond the Numbers,  
2005







# Data → Information → Knowledge



*“Will this piece of data help a classroom teacher change curriculum, assessment and instruction and thus improve student achievement?”*

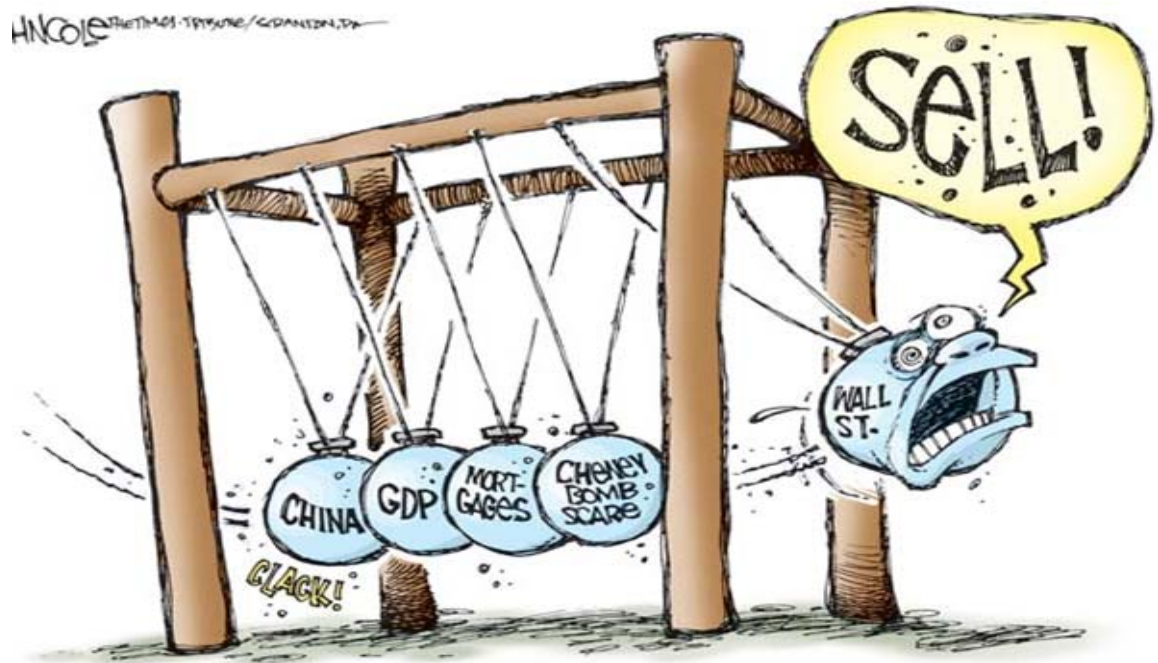
Douglas Reeves



# Cause and Effect data

**Effect Data** – outcomes or results in student learning and achievement

**Cause Data** – professional practices (adult actions) that create specific effects or results



# + Teacher inquiry and knowledge-building cycle to promote valued student outcomes



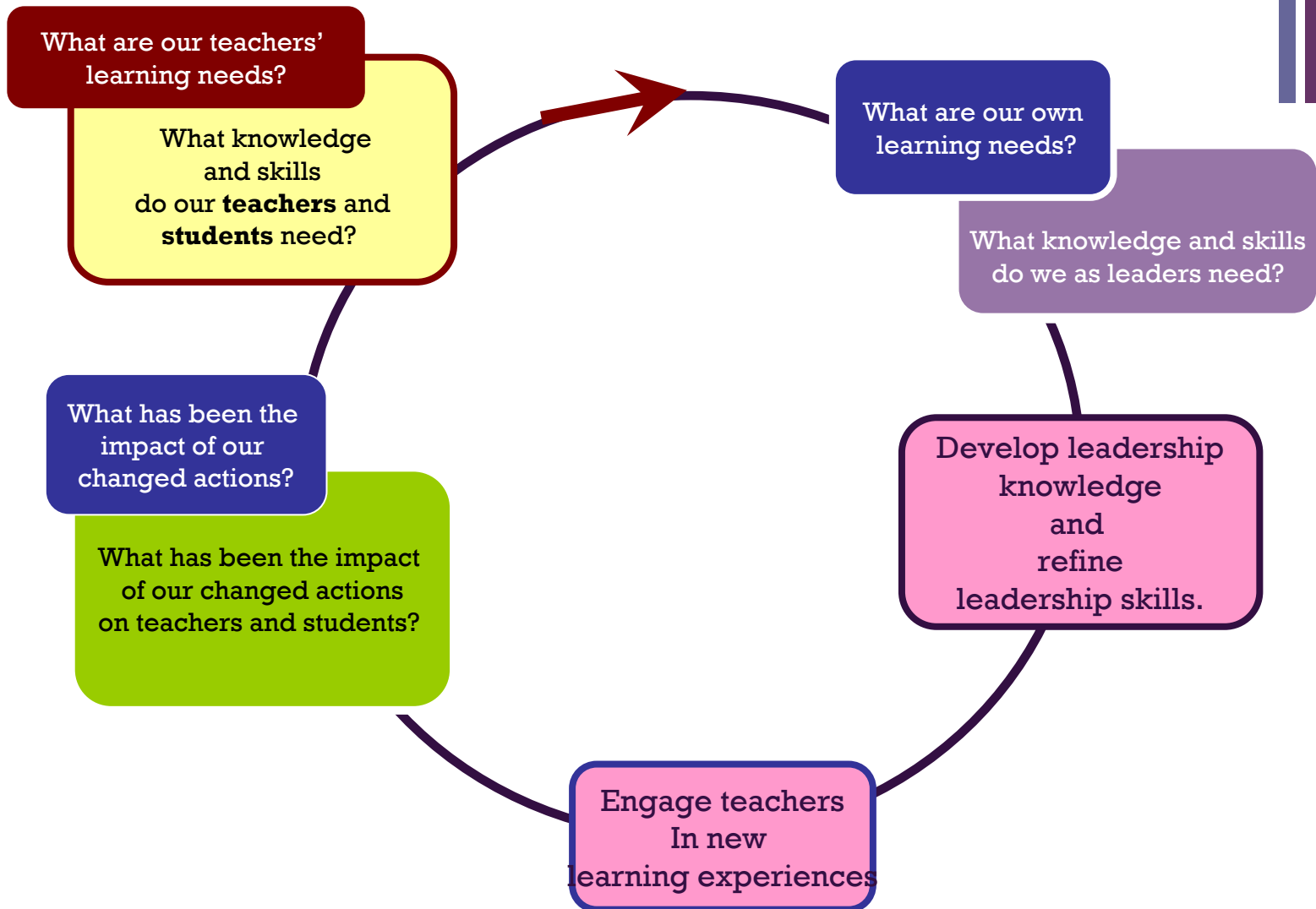
*H. Timperley, A Wilson, H Barrar & I Fung (2007)*

*Teacher Professional Learning and Development: Best Evidence Synthesis Iteration*

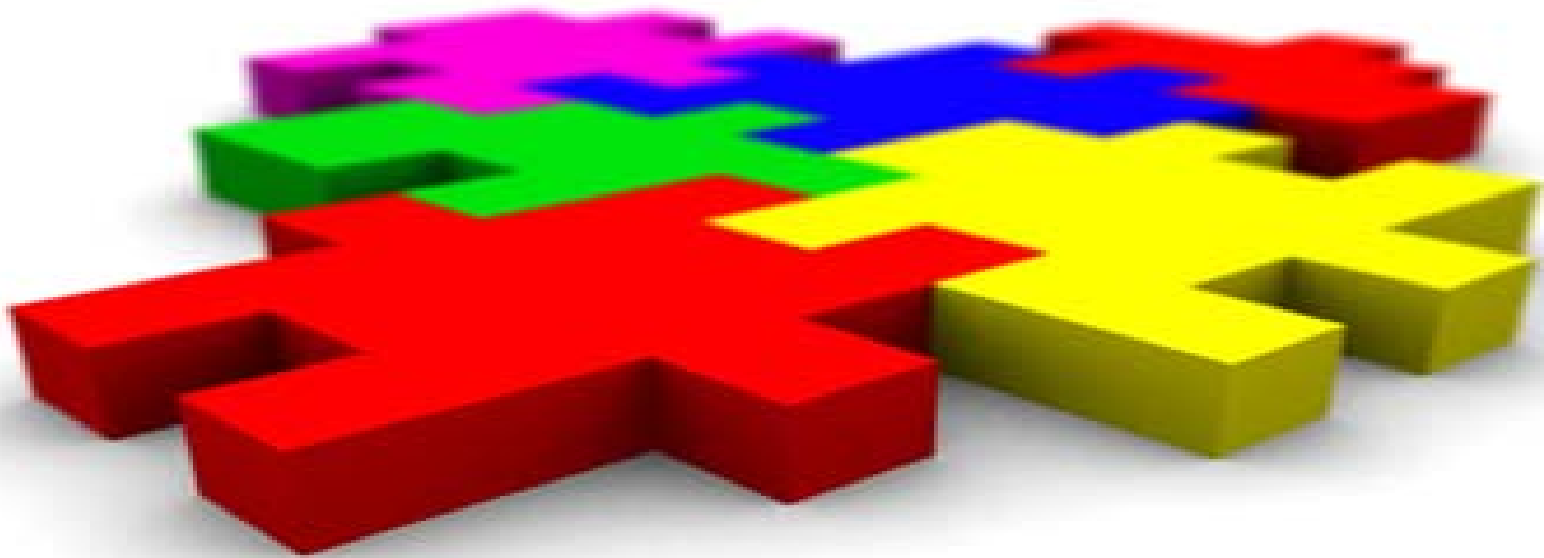
*Wellington, New Zealand: Ministry of Education*

<http://educationcounts.edcentre.govt.nz/goto/BES>

# + Leader inquiry and knowledge-building cycle to promote valued student outcomes



# Connecting Cause and Effect Data at the **program/initiative** level





# Leading, Inquiring, Transforming

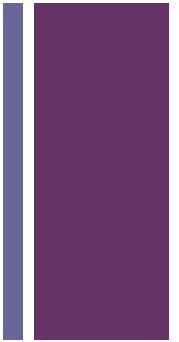
Developing an inquiry habit of mind

Being data literate

Creating a culture of Inquiry



# Collaboration



*“Data analysis is a team sport.”*

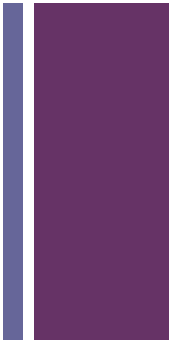
Doug Reeves

- Develops team thinking
- Promotes insights that numbers alone can't produce
- Provides a forum for legitimizing practice
- A characteristic of “Schools that Learn”



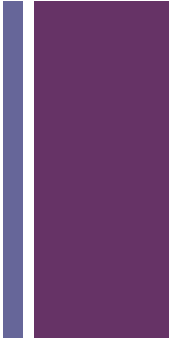


# Data Teams



## ■ Guidelines for effective Data Teams

1. Have collaborative teams
2. Provide adequate time for collaboration
3. Engage in collective inquiry
4. Focus on the cause and effect data
5. Post graphs and charts so they are visible
6. Subscribe to action orientation and experimentation
7. React to our data with sound instructional and curricular decisions
8. Implement an effective communication
9. Are results driven
10. Are devoted to continuous improvement

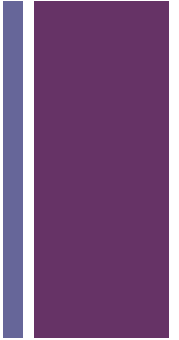


Who do you want to know about?

Students? Teachers? Leaders? Self?

What do you want to know?

## + Monitoring change



How will you know change is or has occurred?

What evidence will you use to monitor the transformation of learners?

What evidence will you use to monitor the transformation of learning?